A Model of Homelessness Among Male Veterans of the Vietnam War Generation

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Objective: *This study explored a multifactorial model of vulnerability to homelessness among male veterans of the Vietnam war generation.* *Method:* *Data from 1,460 male veterans who participated in the National Vietnam Veterans Readjustment Study were used to evaluate hypotheses about the causes of homelessness grouped into four sets of sequential variables: 1) premilitary risk factors, 2) war related and non-war-related traumatic experiences, 3) lack of social support at the time of discharge from military service, and 4) postmilitary psychiatric disorder and social dysfunction. Structural equation modeling was used to explore the posited model of risk factors for homelessness.* *Results:* *Postmilitary social isolation, psychiatric disorder, and substance abuse had the strongest direct effects on homelessness, although substantial indirect effects from stressors related to being in the war zone and from premilitary conduct disorder were observed. Several premilitary factors—year of birth, childhood physical or sexual abuse, other childhood traumas, and placement in foster care during childhood—also had direct effects on homelessness.* *Conclusions:* *Individual vulnerability to homelessness is most likely due to a multiplicity of psychiatric and nonpsychiatric factors, with independent influences emerging at each of four discrete time periods. In view of this complex pattern of influences, prevention efforts directed at individuals must address a very broad range of adjustment problems.*

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Studies conducted during the 1980s suggested that the growing number of homeless adults was primarily attributable to societal factors such as the reduced availability of affordable rental housing, declining personal incomes, the loss of industrial jobs, and the reduced purchasing power of public support payments (1–3). Individual psychosocial risk factors for homelessness were also identified. Prominent among them were being male, belonging to an ethnic minority group, being between the ages of 30 and 44 years, being unemployed, having a major psychiatric or substance abuse disorder (especially schizophrenia), and having a history of disruptive childhood experiences such as physical abuse, sexual abuse, or placement in foster care (3–8). Although most authors subscribed to a multicausal model of homelessness, systematic analysis of the interrelation, relative importance, and sequential relationships of various risk factors has not been undertaken, primarily because few studies have collected data from both homeless and domiciled samples in the same sampling frame and because detailed historical data have not generally been available.

This retrospective cohort study (9) used data from a 1986–1987 national survey of veterans of the Vietnam war generation (the National Vietnam Veterans Readjustment Study) (10, 11) to explore a multifactorial model of homelessness among male veterans who served in the U.S. military forces during the Vietnam war era (1964–1975). All National Vietnam Veterans Readjustment Study respondents were domiciled at the time of the survey, but 8.4% reported that they had "had no regular place to live for at least a month or so" at some time in the past. This response cannot be taken as a precise indicator of a past experience of "literal" homelessness as the term came to be defined in the 1980s, referring to persons who sleep in emergency shelters, the streets, or other nonresidential settings. It can, however, be taken at face value as an indicator of severe residential dislocation, which is, at minimum, a closely related antecedent or variant of literal homelessness. Along with the authors of the original National

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Vietnam Veterans Readjustment Study, we interpret this response as reflecting a past period of homelessness in the more general sense and more traditional use of the term.

Exploration of etiological hypotheses with the use of nonexperimental data has generally been limited by the available techniques of data analysis. Multiple regression analysis has been a useful tool, because it has enabled investigators to evaluate simultaneously the total and unique associations of several variables with an illness or other condition. It is limited, however, in two respects: 1) it makes no provision for allocating shared variance among predictors, and 2) it provides no basis for evaluating the likelihood that causal interpretations of statistically significant relationships are tenable.

Structural equation modeling (12), an extension of multiple regression analysis that has been developed over the past 20 years, at least partially addresses these limitations and was used as an analytic tool in this study. The causal model articulated here is, of necessity, a rudimentary one, relying only on the historical sequence of the variables as the basis for positing causation. It is hoped, however, that studies such as this one can serve in the future as a foundation for the specification and evaluation of more articulated models.

In our analyses, we applied structural equation modeling to an examination of associations between homelessness and several premilitary, military, and postmilitary factors that prior investigation has suggested are likely to contribute to homelessness. Specifically, we examined sequential relationships between homelessness and four sets of variables: 1) premilitary risk factors, 2) war-related and non-war-related traumatic experiences, 3) lack of social support during the first year after discharge from military service, and 4) subsequent postmilitary psychopathology and social dysfunction. In this approach, each variable is viewed as having direct effects on homelessness as well as indirect effects through its influence on subsequent variables. To take one example, having been abused as a child may contribute directly to an individual's homelessness, but it may also result in homelessness indirectly, through its relation to social support and/or mental illness, each of which, in turn, may lead to homelessness.

The advantages of the data available in this study over data available in previous studies are the following: 1) data were collected from a general population sample rather than from a sample of the homeless, 2) the sample was national in scope, 3) data concerning nonoverlapping periods of time preceding homelessness were available, 4) data collection occurred in conventional household settings rather than in public shelters where privacy is often limited, and 5) the overrepresentation of the long-term homeless population that occurs in cross-sectional surveys of currently homeless persons was avoided (7). We hypothesized that no single psychiatric or nonpsychiatric factor, and factors from no single time period, would have a predominant association with homelessness (i.e., account for more than one-half of the total effects identified in the structural model), but rather that the analysis would support a model involving multiple interrelated factors from several developmental periods in the genesis of homelessness.

METHOD

The National Vietnam Veterans Readjustment Study was conducted on a national sample of veterans who served in the U.S. armed forces during the Vietnam war era. The sampling frame was a national screening sample of military personnel records and is described in detail in the original publications on the survey (10, 11). The current study included data on all male veterans in the survey (N=1,523) who had been discharged from the military services during or before 1978, the year in which reports of increasing and more visible homelessness in the United States began to appear. Complete data for analysis were available on 1,460 of these veterans (96% of the sample).

Measures

Hypothesized causal factors for homelessness were grouped into four sets of variables, ordered by their temporal sequence, as follows.

Premilitary period. Measures of premilitary status that were posited to affect homelessness included 1) year of birth (in the national survey, mean=1945, SD=5.4 years), included because adults in the younger segment of the veterans' age range have been reported to be at greater risk for homelessness than others (2); 2) belonging to a minority racial/ethnic group (51% of the survey sample); 3) childhood poverty or parental financial hardship, measured by a three-item index with scores ranging from 2 to 7 (mean score of the sample=4.7, SD=1.6, alpha=0.61); 4) onset of parental mental illness or substance abuse before the veteran was 18 years old (21% of the sample); 5) personal history of treatment for a mental illness before the age of 18 (0.7% of the sample); 6) history of conduct disorder (13, 14), measured by reports of 11 behaviors occurring before the age of 15 (e.g., being in trouble with the law or school officials, playing hooky, being suspended or expelled from school, or doing poorly academically) (mean number of behaviors for the sample=1.7, SD=1.9); 7) placement in foster care (15) before the age of 16 (0.7% of the sample); 8) rating of physical or sexual abuse experienced before the age of 18 (mean=0.41, SD=0.93, range=0–4); and 9) number of traumatic experiences other than physical or sexual abuse that were experienced prior to the age of 18 (mean number=0.10, SD=0.35). This last measure was based on a series of questions that documented up to 19 non-war-related traumatic experiences in adulthood (e.g., a serious accident, a fire or explosion, a natural disaster, or seeing someone mutilated, seriously injured, or killed). Each of these experiences was characterized with respect to the type of trauma, the year of its occurrence, and whether the respondent was a victim. The number of experiences of this type that occurred before the respondent was 18 years old was used for the childhood trauma measure.

Period of military service. War zone traumatic experience was assessed by a scale of exposure to combat ranging from 0 to 14 (16) (mean score=5.7, SD=5.0) and by a dichotomous determination of participation in abusive violence (i.e., atrocities) (25% of the survey sample). Using the information on noncombat trauma described previously, we determined the number of traumatic events occurring between the age of 18 and the time of discharge from military service in a manner comparable to that for childhood traumas and used it as an indicator of non-war-related adult traumatic experience (mean number of events=0.18, SD=0.48).

First year of postmilitary readjustment. Two measures assessed immediate postmilitary social experiences. The first was a scale based on questions that addressed the availability of people with whom the veteran could discuss personal matters during the first year after discharge (possible range of scores=0–35) (mean score=24.2, SD=2.2, alpha=0.60). The second measure was based on questions concerning the availability of material and emotional support after military discharge (possible range of scores=4–8) (mean score=7.5, SD=1.0, alpha=0.78). The mathematical signs for these values were reversed to

create variables that reflect the increased vulnerability to homelessness associated with restricted availability of confidants ("low talk") and limited access to assistance ("low help").

Subsequent postmilitary period. Four features of postmilitary experience were included in the model. Lifetime history of mental illness other than posttraumatic stress disorder (PTSD) was measured with the use of DSM-III diagnoses obtained from the National Institute of Mental Health Diagnostic Interview Schedule (DIS) (17). The respondent received a positive rating on this measure if he met the criteria for at least one of six disorders (major depressive episode, manic episode, dysthymic disorder, panic disorder, obsessive-compulsive disorder, and generalized anxiety disorder) (18% of the national survey sample did). Unfortunately, schizophrenia, the disorder associated with the greatest relative risk of homelessness (5), was not assessed in the National Vietnam Veterans Readjustment Study. The authors of the study felt that assessment of this disorder with the DIS was unreliable in community samples. The absence of any diagnostic indicator of schizophrenia somewhat biases the results in the direction of underestimating the importance of psychiatric disorders in the genesis of homelessness.

PTSD, a disorder of obvious interest in any sample including Vietnam war veterans, was assessed using a cutoff score of 89 on the Mississippi Scale for Combat-Related Post-Traumatic Stress Disorder (18) (23% of the sample met this criterion). In a related validation study that used expert clinical interviews as the standard, the Mississippi scale was shown to be the most accurate of several single measures of PTSD, with a sensitivity of 82% and a specificity of 87% (11). Lifetime diagnoses of substance abuse (present in 42% of the national survey sample) were derived from DIS diagnoses of alcohol abuse or dependence (in 37%) and drug abuse or dependence (in 6%). Finally, postmilitary marital status was assessed with an item that was rated positive if the veteran had never married, was separated, or was divorced at the time of the interview (27% of the sample).

Homelessness. Past homelessness was assessed by a single question: "Has there ever been a period when you had no regular place to live for at least a month or so?" (8.4% of the sample responded yes).

Statistical Analysis

To evaluate bivariate relationships between posited risk factors and homelessness, risk ratios and their 95% confidence intervals were determined for each of the 18 independent variables. Continuous variables were dichotomized for these analyses, either at the median or at values greater than 0.

Structural equation modeling, an extension of multiple regression analysis designed to evaluate hypothesized causal relationships, was used to evaluate the sequential interrelationships between these variables and homelessness. Statistically, structural equation modeling involves the simultaneous solution of all equations and the use of all information in deriving each of the parameter estimates in the model (12). Total effects are partitioned into those that are direct or unmediated by any other variable and those that are indirect or mediated by one or more variables. Conceptually, the extension involves the specification of a model of causation that serves as a guide to the selection of variables to be included in each equation. Structural equation modeling is limited by the fact that it cannot demonstrate causality, but it is a powerful tool for determining the likelihood that causal hypotheses are consistent with the associations in the data. Although the data in the present study were cross-sectional and the reporting was retrospective, the variables selected for inclusion in the model have a clear historical temporal ordering. With the use of this ordering as a logical constraint on the specification of the model, causal paths among variables were hypothesized.

The overall model included one measurement model and one structural model. The measurement model of "low talk" and "low help" generates a latent variable (low support) that is posited to underlie these two manifest indicators. The structural model specifies the pathways hypothesized to link exogenous variables (those without antecedent causes in the model) with endogenous variables (those with antecedent causes in the model) and to link endogenous variables in each temporal group with subsequent endogenous variables. Model estimation was performed on the correlation matrix by using maximum likelihood estimation according to the CALIS procedure (19). Noncausal associations among variables in the same temporal group were included in the model for completeness, but they are not diagrammed, so as to simplify presentation. The model, with significant paths ($p<0.05$), is diagrammed in figure 1. Nonsignificant paths and variables with total effects smaller than 0.05 (i.e., minority racial/ethnic group, parental mental illness, adult noncombat trauma, and PTSD) were eliminated from the diagram to simplify the graphic presentation. The effects of all variables in the model, however, are presented later in tabular form.

RESULTS

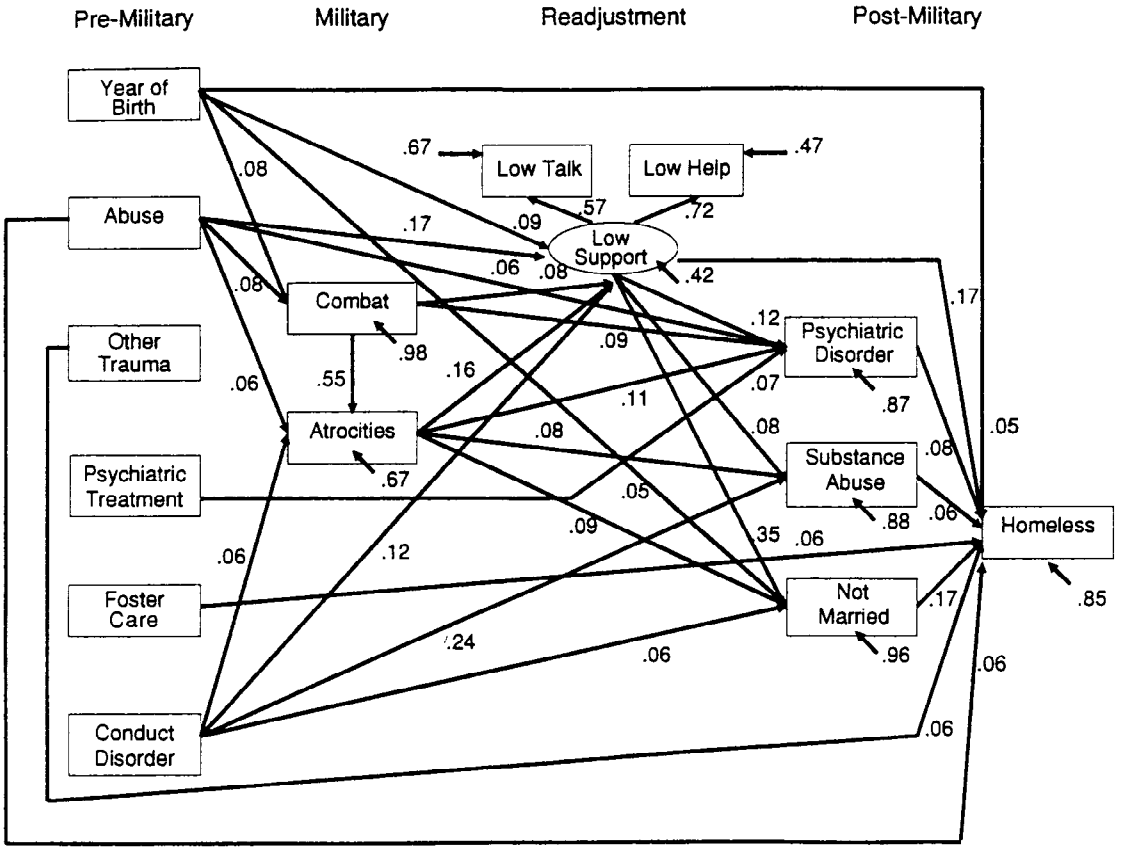
In the bivariate analysis, 16 of the 18 hypothesized causal factors were significantly associated with homelessness (only belonging to a minority racial/ethnic group and parental mental illness were not) (table 1). Risk ratios ranged from 1.0 to 6.5. They were greatest for psychiatric treatment before the age of 18, having been in foster care, having PTSD, and being unmarried. A correlation matrix of all 18 variables revealed significant relationships in 124 (73%) of 170 bivariate correlations, indicating a high degree of interrelationship among the hypothesized risk factors.

The structural model was used to identify unique relationships between each of these factors and homelessness, and between each of these factors and the factors occurring later in the model. Standardized regression coefficients presented in the structural model are often quite different in relative magnitude from the risk ratio estimates. There are two reasons for this. First, risk ratio estimates identify effects on homelessness that are associated with factors that may have only a small representation in the population (e.g., having been placed in foster care), while regression coefficients (like attributable risk estimates) reflect the effect on homelessness of factors among the entire population. In addition, variance that is shared between posited causal factors does not contribute to the individual coefficients in the causal model.

The overall fit of the structural model to the data was highly satisfactory, with a normed fit index (20) of 0.99. The disturbance term (unexplained variance) for homelessness was 0.85 and is identified in figure 1 by the angled arrow next to the box labeled "homeless." This disturbance term indicates that the model accounts for 15% of the total variance in homelessness. Disturbance terms for other variables are also indicated by the numbers next to the short, angled arrows. Numbers along the long arrows connecting variables are the equivalent of standardized regression coefficients (range=0–1) and reflect significant associations between pairs of variables after adjustment for other associated variables.

Review of the causal model (figure 1) shows significant direct paths to homelessness from four postmilitary factors: psychiatric disorder (other than PTSD), substance abuse, not being married, and low levels of support during the first year following military discharge. No significant path from PTSD to homelessness was found, indicating that the influence of PTSD

FIGURE 1. Structural Equation Model of Homelessness Among Veterans of the Vietnam War Era[a]



[a]Variables for which total effects were less than 0.05 (i.e., minority racial/ethnic group, parental mental illness, and PTSD) are excluded.

was accounted for by the other variables (principally other psychiatric disorders) with which it shared variance. Nor was there any direct path from combat exposure or war zone atrocities to homelessness, although several indirect pathways led from these war zone experiences to homelessness. War zone stressors, for example, contributed to low levels of social support, non-PTSD psychiatric and substance abuse disorders, and being unmarried, all of which contributed directly to homelessness.

Four premilitary variables—year of birth, physical and sexual abuse, traumatic experiences other than physical or sexual abuse, and placement in foster care before the age of 16—had direct effects on homelessness. Conduct disorder in childhood had a substantial indirect effect on homelessness through its impact on several war zone and postmilitary variables, especially substance abuse.

Table 2 summarizes the total, direct, and indirect effects of all causal paths in the model. Indirect effects in the table reflect the cumulative strength of relationships between variables and homelessness that were mediated by paths through other variables. Premilitary variables had the strongest total effects on homelessness; the effects of conduct disorder, physical and sexual abuse, and year of birth were especially notable. Military variables had a modest total effect on homelessness, with the strongest contribution from participation in atrocities. Support during the year after discharge from military service had a stronger effect on homelessness than any other single variable in the model, although it was equaled in importance by the combined effect of other postmilitary variables. Overall, social isolation (i.e., lack of social support and not being married) had a stronger effect on homelessness than did psychiatric disorder (psychiatric diagnosis, PTSD, and substance abuse).

DISCUSSION

The data presented in this report support our hypothesis that individual vulnerability to homelessness is the result of multiple psychiatric and nonpsychiatric variables. No one factor dominated all others, and variables from each of four discrete time periods were observed to have significant associations with homelessness. Vulnerability to homelessness seems to accumulate over time and involves multiple aspects of psychiatric illness, social isolation. and antisocial conduct.

TABLE 1. Risk Factors for Homelessness Among Veterans of the Vietnam War Era

Variable	Risk Ratio[a]	95% Confidence Interval[b]
Year of birth	2.2	1.3–4.1
Minority racial/ethnic group	1.0	0.7–1.4
Childhood poverty	1.9	1.3–2.7
Parental mental illness	1.3	0.9–1.9
Childhood physical/sexual abuse	3.1	2.0–4.6
Other childhood trauma	2.3	1.4–3.6
Psychiatric treatment before age 18	6.5	1.9–22.5
Foster care	5.3	2.0–14.2
Conduct disorder	2.7	1.8–4.0
High combat exposure	2.1	1.5–3.0
Participation in atrocities	2.7	1.9–3.8
Adult nonmilitary trauma	1.5	1.0–2.3
No help during first year at home ("low help")	3.9	2.7–5.6
No one to talk to during first year at home ("low talk")	2.6	1.8–3.8
PTSD	5.0	3.5–7.2
Psychiatric disorder	3.7	2.6–5.4
Substance abuse	3.4	2.3–4.9
Not married	4.4	3.1–6.3

[a]Presence of the condition listed versus its absence. For the total sample, risk ratio=1.0.
[b]For the total sample, 95% confidence interval=1.0–1.0.

TABLE 2. Effects of Variables on Homelessness Among Veterans of the Vietnam War Era According to the Structural Equation Model

Variable	Total Effect	Direct Effect	Indirect Effect
Premilitary period			
Year of birth	0.10	0.05	0.04
Minority racial/ethnic group	0.01	–0.03	0.03
Childhood poverty	0.04	0.00	0.03
Parental mental illness	–0.04	–0.07	0.03
Childhood physical/sexual abuse	0.10	0.05	0.05
Other childhood trauma	0.07	0.06	0.01
Psychiatric treatment before age 18	0.05	0.03	0.02
Foster care	0.06	0.06	0.01
Conduct disorder	0.11	0.05	0.06
Total (absolute value)	0.58	0.40	0.28
Military period			
High combat exposure	0.07	–0.01	0.08
Participation in atrocities	0.09	0.04	0.06
Adult nonmilitary trauma	0.04	0.02	0.02
Total (absolute value)	0.21	0.07	0.16
First-year readjustment period			
Low postmilitary support	0.30	0.24	0.06
Total (absolute value)	0.30	0.24	0.06
Subsequent postmilitary period			
PTSD	0.02	0.02	—
Psychiatric disorder	0.08	0.08	—
Substance abuse	0.06	0.06	—
Not married	0.14	0.14	—
Total (absolute value)	0.30	0.30	—

Multiple Causes of Homelessness

Our review of the findings will proceed backward in time from a consideration of proximate factors hypothesized to result in homelessness to more antecedent factors. The factors having the strongest impact on homelessness in this analysis were those related to social isolation: low levels of support during the first year after discharge from military service and being unmarried. The combined effects of these factors were twice as large as the effects of mental illness and substance abuse and support the impressions of others that the individuals most vulnerable to homelessness are distinguished by their limited social resources (2–4, 21) and family support (22). Ours is the first study to attempt to determine the relative effects of social isolation and diagnosed mental illness, and it shows that while both contribute significantly to homelessness, the effects are considerably greater for social isolation than for mental illness. Since schizophrenia, the disorder associated with the greatest relative risk of homelessness (4–6), was not assessed in this study, the relation between psychiatric disorder and homelessness was underestimated to some extent.

Considerable attention has been focused on the large numbers of veterans of the Vietnam war era (many of whom report combat experience) among the homeless (23, 24), even though empirical studies have suggested that these veterans are no more frequently represented among the homeless than among age-matched samples from the general population (25, 26). The present study found no direct relation between war zone traumatic experience and homelessness, but it did identify significant indirect effects that were mediated by social isolation and mental illness. It is especially notable that we found no unique association between combat-related PTSD and homelessness. This suggests that the relation between war zone trauma and homelessness is more attributable to general features of psychiatric illness and substance abuse than to specific psychological problems derived from war zone trauma.

Two premilitary variables, childhood poverty and minority racial/ethnic status, unexpectedly showed no significant pathways to homelessness. Although virtually every survey of homeless persons reports severe poverty in this population, only limited data are available concerning poverty during the years preceding the first episode of homelessness. In one study (3), no relation was found between rates of urban poverty and subsequent homelessness across 147 U.S. cities, suggesting that economic status before adulthood may not necessarily be related to eventual homelessness. However, in the event that a significant association between childhood poverty and homelessness does exist in the general population, this relationship may be obscured among veterans because of selection factors in military recruitment. Men in the military services, while similar to other Americans in many ways, tend to come less frequently from the high and low socioeconomic extremes of society (27).

The absence of any relation between minority status and homelessness is even more difficult to explain. Although the proportion of nonwhites (44%) among homeless veterans in the Vietnam war generation (i.e., those born between 1943 and 1952) is smaller than the proportion of nonwhites among homeless nonveterans in that age group (51%), the proportion of nonwhites

among homeless veterans is still four times the proportion of nonwhites among veterans in the general population (44% versus 10%) (26). In our sample, there was no relation between homelessness and minority status, even in the bivariate analysis. We suggest two alternative explanations for this anomalous finding, one substantive and one methodological. First, it is possible that nonwhite veterans are, in fact, no more likely than white veterans to have experienced a 30-day period during which they had no regular place to stay. It is possible, however, that among nonwhites living in urban areas, these episodes are far more likely to lead to prolonged and repeated episodes of "literal" homelessness (i.e., sleeping in shelters or the streets). Second, it is possible that the National Vietnam Veterans Readjustment Study survey procedures underrepresented the minority households whose members are at high risk for homelessness. Among black veterans who did not serve in Vietnam, for example, the survey response rate was lower than it was among whites (71% and 78%, respectively), and nonrespondents were generally those who did less well in the military services (11). It is possible that both explanations play a role in accounting for this unanticipated finding.

Another striking finding of this study was the large number of premilitary variables that were directly related to homelessness. As expected, veterans from younger birth cohorts were more likely to become homeless than those from older birth cohorts. Many studies have found the age range of 30–44 years to be the period of greatest vulnerability to homelessness among single men (2–4). The youngest age cohorts of veterans of the Vietnam war era would have been in exactly this age range during the mid-1980s, the period, prior to the National Vietnam Veterans Readjustment Study, when homelessness reached its highest levels (3).

Three other premilitary variables (exposure to physical or sexual abuse, exposure to traumatic experiences other than physical or sexual abuse, and placement in foster care) also had significant direct relationships to homelessness. All three of these factors involve serious disruption of the environmental stability presumed necessary for normal personal development. Such disruptions may engender subtle psychological deficits that impair future adaptation, apart from their relationship to formally diagnosed mental illness. The substantial indirect effects of conduct disorder on homelessness draw additional attention to the central importance of social isolation and social alienation as antecedents of homelessness. These relationships also suggest that the high frequency of involvement with the criminal justice system reported among the homeless (2) is likely to be a reflection of behavior patterns that precede homelessness, as a well as of encounters with law enforcement officials that occur as a result of homelessness (28).

Methodological Limitations of the Study

Before concluding, we must acknowledge several limitations in the data we have presented.

Homelessness measure. As we have mentioned, the information on homelessness available in this study was limited. A single question on the survey indicated whether each veteran had found himself without a place to stay for a month or more, but no information is available on when in the veterans' lives this occurred. It seems likely that, as postulated in our model, these episodes occurred after the immediate postmilitary period, because homelessness was uncommon during the 1960s and 1970s (3) and because data from a recent survey (29) indicate that most homeless veterans (61%) first became homeless more than 10 years after their discharge from military service.

The nature and duration of the "homelessness" referred to in this question is also a source of uncertainty. Veterans may have been either staying with friends or relatives or living in shelters, parks, or the streets. They may have been homeless for 1 month or for many years. The "homelessness" examined here did not differ in frequency between those living in urban areas and those living in rural areas (data available from the first author on request), suggesting that the phenomenon whose causes we are examining may be a form of severe residential instability that includes, but is not limited to, the urban street and shelter living often designated as "literal" homelessness (2).

Onset of mental illness and timing of marital separation. An additional limitation of the data concerns the relative timing of the onset of homelessness and the four postmilitary factors included in the model: PTSD, non-PTSD psychiatric disorder, substance abuse, and being unmarried. Since the exact order of events is unknown, it is possible that these factors may have followed, rather than preceded, homelessness—the reverse of the sequence as we have modeled it. Studies examining the onset of psychiatric illness and substance abuse among the homeless, however, suggest that the onset of these disorders preceded homelessness in 70%–90% of cases (30 and unpublished 1992 paper by T.P. Johnson and M.E. Barrett). The possible misspecification (and resultant overestimation) of the impact of psychiatric and substance abuse disorders on homelessness is thus likely to have had only a modest effect on our results. In the case of currently unmarried veterans, we think it quite unlikely that homelessness, by itself, would result in marital disruption, and judge the threat of misspecification in this case to be minimal.

Recall bias. Even if there were no ambiguity in the sequence of events that we have posited to result in homelessness, a fourth limitation is that all of the data used in this study were based on retrospective self-reports and were therefore subject to recall bias. Only a prospective study would completely insure against this problem. Such a study, however, would be extremely expensive, since homelessness is an infrequent event, occurring over many years of adult life.

Generalizability. Finally, we must note limitations to the generalizability of our findings. National survey data suggest that only 40% of homeless men are veterans and that only half of these served during the Viet-

nam war era (26). Thus, this survey captured data on only a small segment of the entire male homeless population. Although homeless veterans have not been found to differ from other homeless men on clinical measures (31), homeless men who served in the military forces do tend to be older, more often white, better educated, and more often previously married than other homeless men.

Granting these limitations, the data we have presented support our posited multicausal model of homelessness. Further analyses with more articulated theoretical models and further research with improved data sets are clearly needed to extend our understanding of the genesis of homelessness.

CONCLUSIONS

Homelessness is a personal and social tragedy that may be more easily prevented than remedied after the fact. Individual vulnerability to homelessness emerged in this analysis, however, not as a specific psychiatric problem or social ill, with narrowly specifiable causes, but rather as the result of a multiplicity of problems. Personal vulnerability to homelessness results from accumulated experiences of social isolation, trauma, psychiatric illness, and social dysfunction, with unique causal influences emerging at several discrete points in time. It is misleading to think of vulnerability to homelessness as specifically related to the failure of the mental health care system or of federal antipoverty policies, to cite two examples. Rather, like the proverbial miner's canary, homelessness is a signal that attention must be paid, far more broadly, to the diverse needs of the many vulnerable populations in our society.

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